

Official *BUSRide*



**ROUNDTABLE
DISCUSSION**

Are We *Really* Achieving Equal Access for All?

BUSRide spoke with industry thought leaders about the present state of accessibility – and where there are opportunities for innovation in the future.

Dave Brown – *president* – MobilityTRANS

Bill and Norma Niederhofer – *owners* – Lone Star Handicap Vans

Ryan Lamb – *regional sales manager, commercial bus group* – REV Group

Don Roberts – *president* – ARBOC

Bill Ott – *vice president, global engineering* – Q'Straint

Tom Wagner – *vice president, public sector and*

Brent Maitland – *vice president,*

marketing and product planning – Motor Coach Industries (MCI)

In which areas related to accessibility does the North American bus industry excel?

Bill Ott: The North American bus industry has a broad focus on not only enhancing wheelchair passenger convenience and comfort, but in helping create solutions that lead to a higher level of safety for those passengers. This mirrors Q'Straint's own efforts to help make safety accessible to these passengers. North America is always leading in technology adoption and integration. We see many properties working with local advocacy groups to better understand their passenger's needs and to integrate the community across all demographics.

Tom Wagner: There are a variety of vehicle types available today that are accessible to passengers using mobility devices, which facilitates compliance with the Americans with Disabilities Act (ADA). There have been innovations by a number of manufacturers including our sister company New Flyer, a pioneer in low-floor vehicles. MCI also has a long legacy of manufacturing accessible coaches. MCI was six years ahead of the 1990 ADA ruling in building the very first coach with a wheelchair lift. We pioneered the inboard-based elevator lift. The debut of our all new MCI D45 CRT LE featuring our patented low-entry vestibule is our largest vehicle development in more than 20 years.

According to some in the industry, one of the most pressing challenges has been the limitations associated with the wheelchair lift. So, MCI set out to find a solution with a focus on simplifying boarding

for all passengers with emphasis on those using mobility devices and added the benefit of a modern and exciting coach, inside and out. Internally, we called this project "Lightspeed" and spent more than four years on the project, researching 32 concepts and engaging key stakeholders, including people with mobility disabilities with the goal of improving accessibility. MCI solved the accessibility challenge with a patented Low Entry (LE) vestibule design with an automated ramp and user-friendly wheelchair securement system.

Bill and Norma Niederhofer: Our industry is providing solutions to the ever-increasing regulations that are being imposed by the government, state, and NHTSA. I think that we're doing a good job of complying and working with NHTSA and the government and creating opportunities in this industry. We are excelling in that area. Every day, it seems like are new demands to adjust to, and I think our industry's doing a good job of meeting these demands and continuing to provide exceptional transportation.

Don Roberts: In regard to accessibility, the North American bus industry improved immensely when medium-duty and heavy-duty fleets upgraded to low-floor buses, rather than standard floors or high floors. Low floors enable all patrons to enter the same door by the use of a ramp with minimal-to-no assistance, in place of being hoisted into the rear of the bus on a platform that takes several minutes, draws unwanted attention, and is even intimidating for some. The majority of these low-floor buses have wide entrances and spacious cabins, >

which provide ample room for wheelchairs to enter and maneuver onto the bus.

Dave Brown: Compared to the rest of the world we enjoy wider aisles, wider seats, larger doorways, stronger wheelchair lifts and more. North American standards in these areas are superior.

Ryan Lamb: We have an advantage because the ADA has raised the minimum standards more than what the larger part of international markets has to adhere to. This gives the US market a nationwide standard to improve the accessibility experience from one vehicle to another.

Conversely, in which areas are we lacking? Why?

Brown: Small purpose-built buses are common everywhere but North America. Small buses in North America are comprised of bodies installed on a multi-use chassis. Moving to small purpose-built buses could yield improvements in many areas, such as low floor accessibility and ride comfort.

Ott: One area due for improvement would be dignity and autonomy for wheelchair passengers without sacrificing safety. For these passengers, holding up the rest of the bus and being the center of attention is a large reason to avoid transit. And while many leading properties opt to improve their technologies with faster equipment that aims to keep the securement process reasonable, effective securement is still mostly in the hands of a driver trying to maintain their schedule.

Brent Maitland: If you assume everyone just wants to get on with their lives, spending less time, and, more importantly, less stress commuting overall, the more we can do to assure an easy, stress-free environment. We can achieve this by providing more accessible transportation for passengers using mobility devices that are better.

Niederhofer: Until recently, we've been going along with the status quo, which has been larger buses with big wheelchair lifts that create issues for our customers. It makes them stand out like a sore thumb when they are loading. Now, there have been changes and we have been looking to things that we can do within our industry to shift away from that. We want to make it easier and a more enjoyable situation for these customers. With the ramp system we use, the ambulatory and the mobility customers both enter in the same doors.

I believe that the lifts should be a thing of the past. As the industry moves forward, I think that you're going to see it move to low-floor buses. This is something I think we're excelling in, too. As the industry's moves away from older models of accessibility, they're coming up with unique solutions.

Lamb: We will always strive to do a better job of improving the accessibility of our vehicles, this mentality is at the forefront of all current and future vehicle design at REV Group.

Roberts: Unfortunately, body-on-chassis ("cutaway") buses with standard floors and wheelchair lifts are still being used throughout North America today. This limits access for passengers in need of extra assistance with steps or wheelchair accessibility. Only 4 percent of transit buses are low-floor cutaways and of this 4 percent, many manufacturers do not offer products which provide a wide enough space in the cabin for easy wheelchair maneuverability. ARBOC offers several different cutaways with ample room for wheelchair maneuverability at varying price points, to ensure we have a bus to meet every customer's needs.

Body-on-chassis buses have always offered an uncomfortable ride, but until today, it was the only option available. ARBOC now offers a purpose-built transit bus called the Spirit of Equess ("Equess") that gives every rider a more pleasant experience.

What best practices can agencies put into place in order to make their operations go above and beyond ADA?

Roberts: It is clear that agencies should incorporate low-floor buses to enhance the accessible experience for riders, however, there is so much more that can be done. It is helpful to have ramp slopes that exceed the ADA standard of 1:4, because although it is certainly preferred to using a lift, it is still quite challenging to ascend with manual wheelchairs. Requiring a spacious entrance and aisle in each bus makes wheelchair maneuverability effortless. Incorporating smaller details, such as contrasting colors and large font for the visually impaired or easy-to-reach stop request buttons for riders in wheelchairs is also important. Drivers should be trained to recognize the need for assistance with boarding and securement and offer their support in these situations.

Brown: Most drivers view a chance to aid a rider with special needs as an opportunity to let their customer service shine. Sadly, sometimes a passenger needing special assistance is seen as an inconvenience. A rider with special needs will quickly sense when they are treated as an interruption. Consider incorporating training regarding the respect and sensitivity for the dignity of those requiring extra driver attention. Think about a driver reward program when customers send in a compliment.

Lamb: It is our job to educate transit agencies about what's available, so they can order vehicles that are better-suited for the best accessibility. If you're following the standards that ADA has put forth, you're just barely meeting the minimum design characteristics that would be accessible to most passengers. We offer multiple vehicles that go above and beyond the ADA minimum. 30 by 48 inches is the minimum size of wheelchair space for ADA; transit agencies often request something larger, like a 55- or 60-inch wheelchair positions. We try to do our best in educating agencies out there, but it's really about an agency driving themselves to spec a vehicle to be better than ADA.

Niederhofer: It seems that everyone is competing in the lift market, to secure better and higher-end lifts. I think we need to open our minds and look outside of the box and see what else is available. ADA is great - they've done a fantastic job of securing opportunities for the disabled by providing regulations, minimal heights and minimal widths. But, we need to not take that gold standard and say, "All we need to do is just comply with this." We need to be looking beyond that. What else can we do?

Wagner: From what we have seen, many transit agencies have also been very good at actively engaging users through their accessibility committees, but in actual vehicle design, there seems to be room for improvement. Overall, ADA, in some cases, is often treated as a minimum expectation. Our philosophical approach was different. More is better, such as more space, more room, more amenities and more comfort. As an example, ADA doesn't specify orientation of switches, buttons and 110v outlets in a way that's easy for someone with a mobility device to access. MCI worked with various focus groups to optimize orientation and functionality. It's a quality of life issue. In addition, accommodating space for a companion is also important. It is not an ADA requirement, but our data showed a companion seat was certainly appreciated.

Ott: For Q'Straint, best practices typically are centered in effective product solutions and standardization. While some properties are still struggling with traditional securement, we have seen many work towards fleet consistency with products such as the Q'POD. Consistency helps eliminate thousands of unknown variables for drivers who never know what they are going to get such as incorrect equipment or installation, variable layouts and other common factors.

When drivers are confident in their equipment we will see effective securement, a higher level of safety, and significantly reduced dwell times. Plus, when agencies are opting for new leading solutions like the QUANTUM alongside the Q'POD, they're able to offer more to the ADA community in the form of dignity and independence.

Please provide an example (or several) of extreme special needs requests your company was able to meet for an operator looking to enhance the accessible experience for their passengers.

Niederhofer: At one of our agencies, they had a passenger who couldn't be transported to his doctor appointments, because he uses a wheelchair and is 500 pounds. With larger chairs and larger customers, the hydraulic lifts may not meet those requirements. Now transit agencies, when requesting a bed, often ask for the 1000-pound lifts, in lieu of the 800-pound lifts that have always been the standard in the industry. These issues can be eliminated by going to the low-floor bus.

The agency went to the passenger's home and invited him to get in the van with a lowered floor, which he was able to do by himself, and he was very comfortable inside. He was so excited because now he knows that there is a ride available that is safe and comfortable, and that he can take to his appointments. This backs up the case for lower floors versus the gold standard, which are the lifts that everyone has been used to. We are seeing more and more companies and agencies in the industry go towards low-floor.

Our unit is smaller in size. It's built on a Promaster, which, if you're not familiar with it, is similar to the Mercedes Sprinter vehicle, so it's a more comfortable ride. We insulate it extremely well, so it's really quiet, also. We've received rave reviews about it.

Maitland: Creating an all-new vehicle to better address passengers with disabilities is a major development for us in terms of resources, so it represents an important commitment. There is a bit of risk in breaking new ground, but the feedback and interest from operators and riders has been extremely positive.

Lamb: At REV Group, we are pursuing vehicle designs that will continue to increase the accessibility experience for every passenger, from small para-transit cutaway low floors to heavy duty fixed route low floor vehicles, we have a complete portfolio of models that put accessibility at the forefront of the design.

Brown: MobilityTRANS pioneered adding bus style doorways to vans. This brings the accessibility of larger buses to vans used in rural and demand response transportation. Also, we are the only company offering full length ejection mitigation airbags in the small transit buses that we build. This is accessibility and increased safety all in one package.

Ott: During my experience working at Q'Straint in South Florida we were fortunate to be in a position to assist transporting people from nursing homes and hospitals before, during and after Hurricane Irma hit the Florida peninsula in 2017. We worked with local transportation companies to outfit many vehicles with mobility securement devices to ensure safe evacuation of wheelchair bound patients. It was a privilege to serve in such a capacity and maintain a higher level of safety for those passengers during such a time of crisis.

How can technology and ITS solutions help make bus operations more accessible?

Ott: We certainly know that technology is not going away and has already started playing a huge role in transportation overall. While we may not have specific examples of how technology will help improve accessibility, we know that Q'Straint will continue to play a

role to make sure these technologies go beyond accessibility to space and extend to higher levels of safety. Any technology opportunities that bring inclusion and dignity for the ADA community are ones we look forward to.

Lamb: On our Champion LF Transport® low-floor cutaway bus, the vehicle has a purpose-built ramp assembly that analyzes what it deploys to and self-aligns all the ramp angles, we call this the Equalizer Ramp®. So, whether that ramp is deploying to the ground or to a curb, all the ramp angles that the wheelchair is rolling across are at the same plane. You're removing anything that would be complicated for a passenger to go up or down, and trip hazards, by bridging between the bus floor and the curb. This would not have been possible prior to the development of systems that control this technology. It automatically senses everything at the flip of a switch, and it's our best example of how technology can affect accessibility.

Niederhofer: The majority of the people now have smartphones and use apps like Uber and Lyft. A GPS system app gives customers a better idea of how to schedule rides. They're usually going to doctor's visit, or they're out shopping, or going to church. But because there's limited amount of transportation, for them to schedule to go to a doctor's appointment, they may have to get there two or three hours early because they only know of one route. A better solution is something that gives real-time updates on the status of the ride. They can look at their smartphones and know all the information, like the bus number or mobility transportation number, when it will arrive, and where it currently is. This is especially important for customers that may have trouble regulating body temperature, for example, if they are quadriplegic or paraplegic.

Roberts: The InQline from Q'Straint enables all wheelchair passengers to access a low floor bus, regardless of the weight of their wheelchair or the ability of the driver to assist them. This product is offered as an option in all ARBOC buses. Also from Q'Straint, the Quantum gives the rider independence by enabling them to secure themselves quickly and completely without assistance or feeling like someone is in their space. In addition to improving accessibility, technology continues to greatly impact safety in the industry. From 360-degree camera systems to head's up displays, the options are endless.

Brown: The dawn of Intelligent Transportation was a few years ago at 6am, but it is just still perhaps at 8am in development! Integrating GPS, smartphones, wi-fi and other technologies into operations is improving access to public transportation for those with and without special needs. Applications, hardware, and software continue to evolve.

Technology is also improving the buses themselves. Buses that self-diagnose and then report issues via email are here and will soon become more mainstream. I can't wait to see what 10am looks like.

Maitland: The technology on our new coach to improve accessibility solves a host of challenges and at the same time provides a new level of riding comfort for passengers using mobility devices. In working with user groups, we have learned that a big cause of stress for passengers with mobility devices is maneuvering on, within, and off a bus. They do not want to be the center of attention by having buzzers blaring or cause another passenger to relocate their seat. They also don't want to delay boarding or be cramped in a main traffic area. They want what the MCI D45 CRT LE offers, easy access on and off the coach, trouble-free wheelchair securement, a spacious seating area and a safe, comfortable ride. To the extent that ITS can enable mobility, say for example easy fare payment, accessibility is also enhanced. 📱